ST 3100 Users Manual

Handset With Color Display

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(Browse www.aircell.com for online manuals with the latest revisions)

Important Telephone Numbers

AirCell Customer Service AIR1 (2471) Toll-free or +1.303.379.0278

AirCell Customer Service Hours of Operation

Monday–Friday, 0730 (7:30 am)–1700 (5:00 pm) USA Mountain Time

Aircraft Numbers

Aircraft Registration _____

Aircraft Make/Model _____

Aircraft Serial Number _____

Aircraft Phone Numbers

Iridium Phone Number _____

Satcom Direct Number (Optional) _____

Aircraft Fax Number (Optional) _____

Table of Contents

Welcome

Congratulations 1
AirCell and the Iridium Satellite Network 1
Calling Emergency and Toll-Free Numbers 1
Calling with Operator or Directory Assistance. 1
Placing Calls to Another Iridium Phone. 1
Learning About the Handset 2

Getting Started

Turning Power On 3
Viewing Instructions on the Main Dialing Screens 3
Using the Function Key 4
Learning About Functions 4
Selecting Menu Choices 4

Using Your Phone System

Placing Calls from the Aircraft. 5
Placing Calls to Another Iridium Phone. 5
Redialing. 5
Calling Stored Phone Numbers 6
Receiving Calls 6
Ending Calls 6
Muting or Unmuting Calls. 6
Joining Party Line Calls 6
Learning About Calling 7
Placing Calls to the Aircraft from the Ground 8

Personalizing Your Phone System

Using Your Personal Phone Book. 9
Learning About Entering Characters. 10
Using One-Touch Speed Dialing. 11
Showing or Clearing a Handset's Call Record 11
Changing the Ear Piece Volume. 12
Changing the Key Tone Volume. 12
Changing the Ringer Volume. 12
Changing the Ring Tone Style 13

Changing the Display or Keypad Lighting 13
Locking or Unlocking Handsets. 14
Resetting a Handset. 14
Showing Version Information. 14

Integrating Other Equipment

Using the Iridium Network for Data Calls 15
Connecting Equipment for Data Calls 15
Placing Data Calls. 15

Appendix

International Direct Dial Prefixes and Country Codes 17

Welcome

Congratulations

Congratulations on purchasing the AirCell ST 3100 system. We're proud to add you to the thousands of satisfied AirCell customers around the globe. We wish you many years of productive and efficient airborne communications.

Your ST 3100 system offers a host of exceptional features, many of which were previously unavailable in an airborne telephone system:

- Easy-to-use graphical menus
- Noise reduction
- Headset and earbud compatibility
- Internal phone books
- Award-winning AirCell product support

AirCell and the Iridium Satellite Network

Your telephone system works with the Iridium Satellite Network of 66 Low-Earth Orbit (LEO) satellites and operates in the frequency range of 1616 MHz to 1625.5 MHz.

Calling Emergency and Toll-Free Numbers

The Iridium Satellite Network System for aeronautical use does not currently support Emergency 911 calls. Toll-free numbers, such as 800, 877, and 888 numbers, may not work for Iridium or international calls.

Calling with Operator or Directory Assistance

The Iridium Network does not support operator-assisted calling or Directory Assistance.

Placing Calls to Another Iridium Phone

To place a call from one Iridium phone to another Iridum phone, dial 8816 + XXX.XXXXX (other subscriber's Iridium Network Number).

Learning About the Handset

Note these important areas of your handset:

1 Displays the number dialed or system status

2 Displays more options

3 Accesses menus & features

4 Enters numbers & characters

5 Recalls (opens phone book)

6 Does nothing (not used with ST 3100 system)

7 Connects headphones

8 Scrolls up & turns volume up

9 Scrolls down & volume down

10 Dials speed dial numbers

11 Clears (deletes) characters

12 Connects call

13 Disconnects call

Getting Started

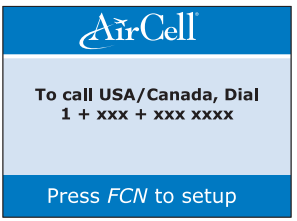
Turning Power On

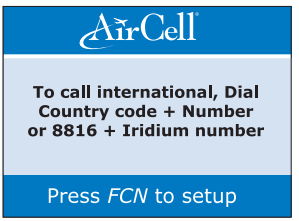
Your phone has power anytime the aircraft's main avionics power switch is on. During initial power up, the AirCell Logo Screen appears in the phone's display. Once the Main Dialing Screens with instructions appear, you can use the phone.

Note: *You can only turn system power off using the main avionics power switch or the phone's circuit breaker – not by using the handset.*

Viewing Instructions on the Main Dialing Screens

When the phone is idle, dialing instructions alternate between two different main screens.





Press the CLR key – or just start dialing – to access the dialing screen. You are now ready to place a call using the Iridium Network.

Using the Function Key

Press the handset's FCN key to access your phone's additional menus and advanced functions. You will do this frequently, so remember this key.

Once you press this key, additional menu choices become available. You can select one of the menu choices shown below.

Not all function menu choices are available at all times. Menu choices display only when they are available.

Learning About Functions	
FCN 0	Change Keypad Lock Code
FCN 1	Change Key Tone Volume
FCN 2	Show Call Record
FCN 3	Show Version Information
FCN 5	Lock Keypad
FCN 7	Mute or Unmute Handset (Only During Call)
FCN 8	Change Display or Keypad Lighting
FCN 9	Join Party Line Call

Selecting Menu Choices

To select a menu choice, press the FCN key and then the number for the desired function.

Using Your Phone System

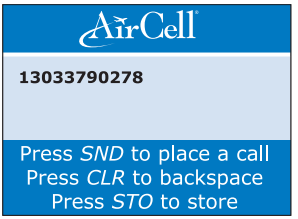
Placing Calls from the Aircraft

The Main Dialing Screen displays the calling instructions.

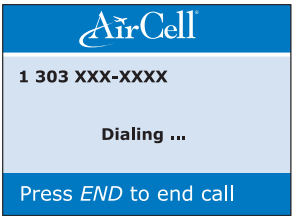
How to place a call:

1 From the Main Dialing Screen, dial the number, then press SND.

- USA/Canada: Dial 1 + Area Code + Number.
- International Calls: Dial Country Code + Number.

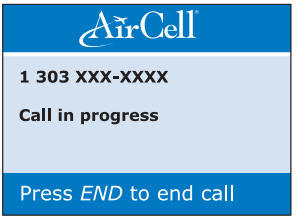


2 While call is connecting, the number and **Dialing** displays.



3 When your call connects, **Call in progress** displays.

Note: *You may hear up to five beeps in the 10–12 seconds while your call is being connected.*



Placing Calls to Another Iridium Phone

To place a call from one Iridium phone to another, dial 8816 + XXX.XXXXX (other subscriber's Iridium Phone Number).

Redialing

To automatically redial the last number called, press SND to display the last number. Then press SND again to redial that number.

Calling Stored Phone Numbers

You can quickly call phone numbers stored in your personal phone book, or stored as speed dialing numbers. For details on these two features, see the section on "Personalizing Your Phone System."

Receiving Calls

When your telephone rings, pick up the handset and press the SND key to answer the phone.

Ending Calls

Always press the END key to end your current call.

Muting or Unmuting Calls

To mute the handset's microphone, press FCN and then press **7**. While the handset is muted, you can hear other callers, but they cannot hear you. While muted, the screen displays **[MICMUTE]**.

To unmute the handset's microphone, press FCN and then press **7**.

Joining Party Line Calls

Two or more AirCell handsets can be used as a party line for conferencing aboard the aircraft.

How to use the party line:

1. With the handset idle, press FCN and then press **9** to join a call.
2. Optionally, to mute or unmute the microphone, press FCN and then **7**.
3. To end a party line call, do one of the following:
   - To end the call for all handsets on the party line, press END.
   - To end the call for your extension only, press FCN and then press **9**.

Learning About Calling

All calls using the Iridium Satellite Network are considered international calls. When calling Iridium-equipped aircraft, always use the 8816 Iridium Country Code.

Direct-dialed calls to an AirCell ST 3100 phone are billed by long distance providers as international calls. Since rates vary greatly, check rates before making calls. Or use two-stage dialing, which is generally more cost effective.

Some long distance providers do not recognize the 8816 Iridium Country Code. Two-stage dialing does recognize the Iridium Country Code.

In the procedures, 00** represents the International Direct Dial (IDD) access code prefix of the country you are calling from. In many countries, the IDD code is 00.

See the Appendix for a list of International Direct Dial (IDD) access code prefixes, as well as Country Codes.

For a more current list of codes, refer to Internet sites such as www.iridium.com/customer.

Placing Calls to the Aircraft from the Ground

Placing a call to an AirCell ST 3100-equipped aircraft through the Iridium Network is quick and easy. You can either dial direct, or use two-stage dialing.

Two-Stage Dialing to the Aircraft from the Ground

Two-stage dialing is generally the most cost-effective method of calling an AirCell ST 3100-equipped aircraft. Using this method, the calling party is charged by their long distance provider for a call to Tempe, Arizona, USA for the call's duration. The called party (in the aircraft) is charged AirCell per-minute charges, from the time the call connects in Tempe, until the call is ended.

How to use two-stage dialing:

1. Dial the Iridium Call Routing Center:
   - From USA/Canada: Dial 1.480.768.2500.
   - From outside USA/Canada: Dial 00** (IDD) + 1 (USA Country Code) + 480.768.2500.
2. When prompted, dial the 8816 (Iridium Country Code) + XXX.XXXXX (Iridium Phone Number you are calling).

   The call is routed to the aircraft. If the system is registered on the network, the phone will ring in 4–6 seconds.

Direct Dialing the Aircraft from the Ground

When direct dialing an Iridium-equipped aircraft, there may be a pause of up to 25 seconds as the system completes your call.

How to use direct dialing:

- USA/Canada: Dial 011 (IDD) + 8816 (Iridium Country Code) + XXX.XXXXX (Iridium Phone Number).
- Outside USA/Canada: Dial 00** (IDD Access Code Prefix) + 8816 (Iridium Country Code) + XXX.XXXXX (Iridium Phone Number you are calling).

Personalizing Your Phone System

Using Your Personal Phone Book

You can store and recall up to 10 frequently-called phone numbers. You also have the option of storing a name that identifies each stored number.

How to store a phone number in your phone book:

1. Enter the phone number in one of the following formats:
   - 1 + Area Code + Number
   - Country Code + Iridium Phone Number
2. Press STO to store the number.
3. At the **Store Location** prompt, press * to use the next open memory location.
4. At the **Enter name** prompt, enter up to seven characters, then press STO. Or to leave the name blank, simply press STO.

How to edit a number stored in your phone book:

1. Press RCL to display your phone book.
2. Scroll through the stored numbers list by pressing ▲ or ▼.
3. Select the stored number by pressing **0**–**9** or a or speed dialing key. Then press STO to edit the selected entry.
4. At the **New Location** prompt, press STO to resave the existing location.
5. At the **New Number** prompt, press CLR to backspace, enter your corrected number, then press STO to continue.
6. At the **New Name** prompt, press CLR to backspace, enter your corrected name, then press STO to continue.

How to dial a number stored in your phone book:

1. Press RCL to display your phone book.
2. Scroll through the saved numbers list by pressing or .
3. Press **0**–**9** or a or speed dialing key to select number.
4. Press SND to call the selected number.

How to clear a phone number from your phone book:

1. Press RCL twice to display your phone book.
2. Scroll through the saved numbers list by pressing or .
3. Press **0**–**9** or a or speed dialing key to select number.
4. Press CLR to delete the selected entry.
5. At the **Clear?** prompt, press STO to confirm the deletion of the number from your phone book. Or press END to cancel.

Learning About Entering Characters

Use the same basic techniques when entering characters for your phone book or one-touch speed dialing.

You can enter alphabetic or numeric characters using the phone's keypad.

To enter characters, use the "multi-press" procedure common to personal cell phones. For example:

- To enter the letter **a**, press the **2** key once.
- To enter the letter **b**, press the **2** key twice.
- To enter the number **2**, press the **2** key four times.

To backspace over a character and select a new character, press CLR.

Using One-Touch Speed Dialing

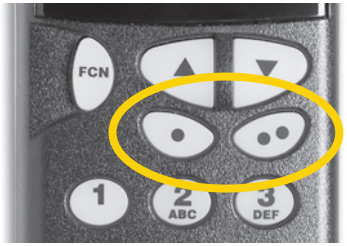
For one-touch dialing, you can use two special keys: and . Store one frequently-called number, such as your home or main office number, for each of the keys.

How to store a speed dialing phone number:

1. Enter the phone number in one of the following formats:
   - 1 + Area Code + Number
   - Country Code + Number+ Iridium Phone Number
2. Press STO to store the number.
3. At the **Specify a location** prompt, press or key to store the number at that location.
4. At the **Enter name** prompt, enter a name, then press STO to store your entry.

How to call a stored speed dialing phone number:

1. Press one of the two speed dialing keys: or .
2. Press SND.



Showing or Clearing a Handset's Call Record

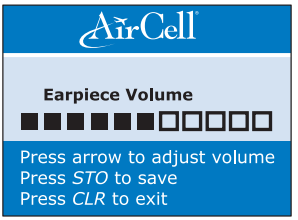
You can show or clear your handset's call record, in minutes used.

How to show or clear a call record:

1. To show the record, press FCN and then press **2**.
2. Optionally, to clear the call record that is showing, press CLR and then press STO.
3. Press END to exit.

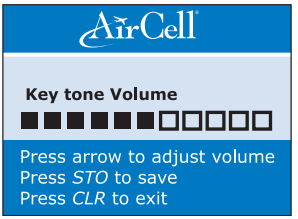
Changing the Ear Piece Volume

You can change the ear piece volume during a call. Increase or decrease the volume by pressing the ▲ or ▼ keys. Press STO to save your setting.



Changing the Key Tone Volume

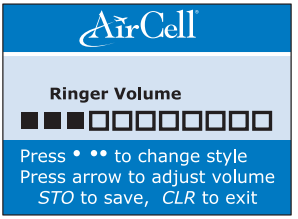
You can adjust the key tone volume. Increase or decrease the volume by pressing FCN and then **1**. Next press the ▲ or ▼ keys. Press STO to save your setting.



The volume level displays. At the lowest setting, the key tone is off.

Changing the Ringer Volume

You can change the ringer volume. Increase or decrease the volume by pressing the ▲ or ▼ keys. Press STO to save your setting.

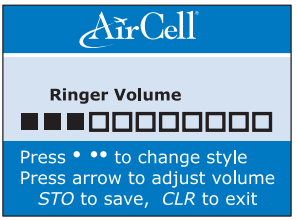


The volume level displays. At the lowest setting, the ringer is off.

Changing the Ring Tone Style

You can change the ring tone (sound when phone rings) style. Change the ring tone by pressing ▲ or ▼. Next press a ◉ or ◉ key.

Press STO to save your setting.



Changing the Display or Keypad Lighting

You can change the lighting of the handset's display, or the keypad.

How to change the display or keypad lighting:

1. Press FCN and then **8**. The screen now displays options for **Display Bright** and **Keypad Light**.
2. Make the desired changes:
   - To adjust the display brightness, press the ▲ or ▼ keys.
   - To adjust the keypad lighting, press a ◉ or ◉ key.
3. Press CLR to exit

Locking or Unlocking Handsets

You can lock or unlock handsets to prevent unauthorized use. The lock setting remains even after turning system power off and on.

How to lock a handset:

1. Press FCN, and then press **5**.
2. At the **LOCK HANDSET?** prompt, enter the locking code **333**.
3. Press STO to lock the handset from use, and display a confirmation. Or press END to cancel.

How to unlock a handset:

1. Press the unlocking code **333**.
2. If you make an error, start over by pressing CLR.

Note: *If a handset is locked when a call comes in, you must unlock the handset to answer the phone.*

How to change the locking code:

1. Press FCN, and then press **0**.
2. Follow the on-screen directions.

Resetting a Handset

If a handset becomes inoperative, first try pressing the END key. If that doesn't solve the problem, reset the phone system's circuit breaker.

Showing Version Information

You can show information about your handset by pressing FCN, then **3**.

Integrating Other Equipment

Using the Iridium Network for Data Calls

Data calls are limited to the 2.4 Kbps bandwidth of the Iridium Network, which has been optimized for voice services.

For best results with data calls, we recommend the Direct Internet 2.0 service from Iridium. This new service uses dedicated network ground servers, plus data compression techniques, that result in faster data transfer rates. Direct Internet 2.0 requires a compatible computer, a serial cable, an available Iridium transceiver channel, and the installation of free software. For information, visit www.iridium.com.

Connecting Equipment for Data Calls

Your AirCell ST 3100 system provides you with one data channel, which uses the Iridium Network. Connect a PC data device using a standard RS-232 serial computer cable.

Note: *Only one data device can be connected on a channel – so be sure to promptly disconnect any unneeded device.*

Placing Data Calls

Your AirCell ST 3100 system lets you place e-mail and Internet data calls. You cannot simultaneously place a data call and a voice call.

How to place a data call:

1. Connect the computer to your system.
2. Using your software, initiate a data call.
3. While connecting, watch the call progress on the computer monitor. Watch for the message that indicates a connection.
4. Test the connection by opening a simple Web site with your browser. For example, browse www.google.com.
5. During a data call, the handset displays **No Line Available** or **Data Call**.

   Note: *If you cannot connect, check your hardware connections, software settings, and dialing information. If problems persist, contact AirCell Customer Support.*

Appendix

International Direct Dial Prefixes and Country Codes

To make a call, dial IDD Prefix + Country Code + Phone Number.

Note: *At International Direct Dial Prefix access code, wait for second tone.*

Location	Country Code	IDD Prefix
AFGHANISTAN	93	00
ALBANIA	355	00
ALGERIA	213	00~
AMERICAN SAMOA	684	00
ANDORRA	376	00
ANGOLA	244	00
ANGUILLA	264*	011
ANTARCTICA	672	
ANTIGUA	268*	011
ARGENTINA	54	00
ARMENIA	374	8~10
ARUBA	297	00
ASCENSION ISL.	247	01
AUSTRALIA	61	0011
AUSTRIA	43	00
AZERBAIJAN	994	8~10
BAHAMAS	242*	001
BAHRAIN	973	0
BANGLADESH	880	00
BARBADOS	246*	011
BARBUDA	268*	011
BELARUS	375	8~10
BELGIUM	32	00
BELIZE	501	00
BENIN	229	00
BERMUDA	441*	011
BHUTAN	975	00
BOLIVIA	591	00
BOSNIA & HERZOGOVINA	387	00
BOTSWANA	267	00
BRAZIL	55	00
BRITISH VIRGIN ISL.	284*	011
BRUNEI	673	00
BULGARIA	359	00
BURKINA FASO	226	00
BURMA (MYANMAR)	95	0
BURUNDI	257	90
CAMBODIA	855	00
CAMEROON	237	00
CANADA	1	011
CAPE VERDE ISL.	238	0

Location	Country Code	IDD Prefix
CAYMAN ISL.	345*	011
CENTRAL AFRICAN REPUBLIC	236	19
CHAD	235	15
CHATHAM ISL., N. ZEAL.	64	00
CHILE	56	00
CHINA (PRC)	86	00
CHRISTMAS ISL.	672	00
COCOS-KEELING ISL.	61	0011
COLOMBIA	57	90
COMOROS	269	10
CONGO	242	00
CONGO, DEM. REP. OF (Former ZAIRE)	243	00
COOK ISL.	682	00
COSTA RICA	506	00
CROATIA	385	00
CUBA	53	119
CUBA (Guantanamo Bay)	5399	00
CYPRUS	357	00
CZECH REPUBLIC	420	00
DENMARK	45	00
DIEGO GARCIA	246	00
DJIBOUTI	253	00
DOMINICA	767*	011
DOMINICAN REPUBLIC	809*	011
EASTER ISL.	56	00
ECUADOR	593	00
EGYPT	20	00
EL SALVADOR	503	0
EQUATORIAL GUINEA	240	00
ERITREA	291	00
ESTONIA	372	8~00
ETHIOPIA	251	00
FAEROE ISL.	298	009
FALKLAND ISL.	500	0
FIJI ISL.	679	05
FINLAND	358	00, 990, 994, 999
FRANCE	33	00

International Direct Dial Prefixes and Country Codes

To make a call, dial IDD Prefix + Country Code + Phone Number.

Location	Country Code	IDD Prefix
FRENCH ANTILLES	596	00
FRENCH GUIANA	594	00
FRENCH POLYNESIA	689	00
GABON	241	00
GAMBIA	220	00
GEORGIA	995	8~10
GERMANY	49	00
GHANA	233	00
GIBRALTAR	350	00
GREECE	30	00
GREENLAND	299	009
GRENADA	473*	011
GUADELOUPE	590	00
GUAM	671*	011
GUANTANAMO BAY	5399	00
GUATEMALA	502	00
GUINEA-BISSAU	245	00
GUINEA (PRP)	224	00
GUYANA	592	001
HAITI	509	00
HONDURAS	504	00
HONG KONG	852	001
HUNGARY	36	00
ICELAND	354	00
INDIA	91	00
INDONESIA	62	001,008
IRAN	98	00
IRAQ	964	00
IRELAND	353	00
IRIDIUM NETWORK	8816	00
ISRAEL	972	
Calling Israel may be illegal in certain locations	(BEZEQ LTD)	00
	(GOLDEN LINES)	012
	(BARAK LTD)	013
	(BEZEQ LTD)	014
ITALY	39	00
IVORY COAST	225	00
JAMAICA	876*	011
JAPAN	81	001
JORDAN	962	00
KAZAKHSTAN	7	8~10
KENYA	254	000
KIRIBATI	686	00
KOREA (NORTH)	850	00
KOREA (SOUTH)	82	001

Location	Country Code	IDD Prefix
KUWAIT	965	00
KYRGYZ REPUBLIC	996	8~10
LAOS	856	14
LATVIA	371	00
LEBANON	961	00
LESOTHO	266	00
LIBERIA	231	00
LIBYA	218	00
LIECHTENSTEIN	41	00
LITHUANIA	370	8~10
LUXEMBOURG	352	00
MACAU	853	00
MACEDONIA (Former YUGOSLAV REPUB.)	389	00
MADAGASCAR	261	16
MALAWI	265	101
MALAYSIA	60	00
MALDIVES	960	00
MALI REPUBLIC	223	00
MALTA	356	00
MARSHALL ISL.	692	00
MARTINIQUE	596	00
MAURITANIA	222	00
MAURITIUS	230	00
MAYOTTE ISL.	269	10
MEXICO	52	00
MICRONESIA	691	011
MIDWAY ISL.	808	00
MOLDOVA	373	8~10
MONACO	377	00
MONGOLIA	976	00
MONTSERRAT	664*	011
MOROCCO	212	00~
MOZAMBIQUE	258	00
MYANMAR	95	0
NAMIBIA	264	09
NAURU	674	115
NEPAL	977	00
NETHERLANDS	31	00
NETH. ANTILLES	599	00
NEVIS	869	011
NEW CALEDONIA	687	00
NEW ZEALAND	64	00
NICARAGUA	505	00
NIGER	227	00

International Direct Dial Prefixes and Country Codes

To make a call, dial IDD Prefix + Country Code + Phone Number.

Location	Country Code	IDD Prefix
NIGERIA	234	009
NIUE	683	00
NORFOLK ISL.	672	00
NORTH KOREA	850	00
NORWAY	47	00
OMAN	968	00
PAKISTAN	92	00
PALAU	680	00
PANAMA	507	0
PAPUA NEW GUINEA	675	05
PARAGUAY	595	00
PERU	51	00
PHILIPPINES	63	00
POLAND	48	0~0
PORTUGAL	351	00
PUERTO RICO	787*	1
QATAR	974	0
RÈUNION ISL.	262	00
ROMANIA	40	00
ROTA ISL.	670	011
RUSSIA	7	8~10
RWANDA	250	00
ST. HELENA	290	01
ST. KITTS/NEVIS	869*	011
ST. LUCIA	758*	011
ST. PIERRE & MIQUELON	508	00
ST. VINCENT & GRENADINES	809*	011
SAIPAN ISL.	670*	011
SAN MARINO	378	00
SAO TOMÉ & PRINCIPE	239	00
SAUDI ARABIA	966	00
SENEGAL	221	00
SERBIA	381	00
SEYCHELLES ISL.	248	00
SIERRA LEONE	232	00
SINGAPORE	65	001
SLOVAK REPUBLIC	421	00
SLOVENIA	386	00
SOLOMON ISL.	677	00
SOMALIA	252	19
SOUTH AFRICA	27	09, 091
SOUTH KOREA	82	001
SPAIN	34	07~
SRI LANKA	94	00
SUDAN	249	00

Location	Country Code	IDD Prefix
SURINAME	597	00
SWAZILAND	268	00
SWEDEN	46	009
SWITZERLAND	41	00
SYRIA	963	00
TAIWAN	886	002
TAJIKISTAN	7	8~10
TANZANIA	255	00
THAILAND	66	001
TINIAN ISL.	670	011
TOGO	228	00
TOKELAU	690	00
TONGA ISL.	676	00
TRINIDAD & TOBAGO	868*	011
TUNISIA	216	00
TURKEY	90	00
TURKMENISTAN	993	8~10
TURKS & CAICOS ISL.	649*	011
TUVALU	688	00
UGANDA	256	00
UKRAINE	380	8~10
UNITED ARAB EMIRATES	971	00
UNITED KINGDOM	44	00
USA	1	011
US VIRGIN ISL.	1	01
URUGUAY	598	00
UZBEKISTAN	7	8~10
VANUATU	678	00
VATICAN CITY	376	00
VENEZUELA	58	00
VIETNAM	84	00
WAKE ISL.	808	00
WALLIS & FUTUNA ISL.	681	19~
WESTERN SAMOA	685	0
YEMEN	967	00
YUGOSLAVIA	381	99
ZAMBIA	260	00
ZIMBABWE	263	00

Notes:

* USA/Canada: Dial 1 + Code + Phone Number.
Elsewhere: Dial IDD + 1 + Code + Phone Number.

** Dial 95 to dial USA/Canada/Caribbean; country code not needed.

~ Wait for a second tone at this stage.

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